Healthy Children

Health Objectives for the Year 2010: Improve the knowledge of health, attitudes, and behaviors of children.

Health Implications

The four topics – children's environmental health, adolescent mental health, child care, and school health – and the health indicators selected for this chapter are individually very important to the health of children. There are also numerous topics applicable to this discussion elsewhere in this report that have significant focus for children: Maternal and Child Health, Oral Health, Access to Care, Tobacco Use, Immunizations and Communicable Diseases, Nutrition and Physical Fitness, Alcohol and Other Drugs, Sexual Behavior, and Unintentional and Intentional Injury. Please refer to the table of contents for locating health data, health indicators, and public health comments regarding specific topics as they relate to children's health.

Family income, education-related differences in knowledge, and time to pursue healthy behaviors influence the health and well-being of children. Disparities in these areas are apparent in measurable health factors, such as smoking, overweight, elevated blood lead levels, lifestyle (sedentary vs. active), personal health perceptions (risky behaviors), diabetes mortality, activity limitations, and access to health care (health insurance coverage and medical/dental visits). Progress in meeting health objectives with children and youth is improving primarily in the higher socioeconomic groups, leaving the lower groups to lag behind. Disparity by race and ethnicity is also evident between the general population and at least one select population. Healthy People 2000 identified a disparity of 25% or greater due to race/ethnicity in the areas of overweight, prevalence of diabetes, smoking and use of smokeless tobacco, teen pregnancies, suicides, unintentional injury, asthma hospitalizations, diabetes deaths, and adolescent sexual intercourse.

Children's Environmental Health

Environmental factors play a central role in the processes of human development, health, and diseases of children. Exposure to hazardous agents in the air, water, soil, and food and to physical hazards in the environment is a major contributor to increased morbidity and mortality. The potential health effects of pollutants range from mild sensory irritation to acute toxicity, chronic organ damage to death. The extent of harm to a child depends on the number of factors, including individual susceptibility, and the degree of exposure. Higher disease levels generally are found among members of racial and ethnic

Table 1. Healthy Children Indicators

	Lancaster Recent	Lancaster Objective 2010	Nebraska Recent	Nebraska Objective 2010	National Recent	National Objective 2010
Percent of related children under age 18 who live in poverty	11.1[1]	10.0	12.6[1]	--	18.9[2]	--
Emergency room visits for asthma per 10,000 children under 15 years	--[3]	40.0	--	--	121.0/81.0[4]	--[5]
Percent of children under 6 years of age with elevated blood lead levels greater than 10 μg/dl	9.9[6]	0	7.3[7]	--	4.4[8]	0[9]
Percent of youth in grades 9–12 who report an injurious suicide attempt within past year	3.2[10]	1.0	2.4[11]	--	2.6[12]	1.8[9]
Percent of child care facilities with no critical item violations at their last regular inspection	84.9[13]	95.0	--	--	--	--
Percent of parents who report that they are able to access affordable, quality child care	--[14]	100.0	--	--	--	--
Percent of junior and senior high schools requiring 1 school year of health education	0	30.0	--	--	20.0[9]	30.0[9]
Percent of children with disabilities whose parents report that they participate in community activities with nondisabled peers	--[15]	75.0	--	--	45.0[9]	60.0[9]

minority groups, children from low income families and children whose parents have less than a high school education.[1]

Asthma, a chronic inflammatory disease of the airways, is the most prevalent serious chronic illness among children. An attack involves spasm of the bronchial tubes or swelling of the mucous membranes, causing difficulty in breathing accompanied by wheezing. Environmental factors such as tobacco smoke, allergens, and upper respiratory infections contribute to asthma morbidity. Most children have relatively mild problems with asthma and can be treated at home or in a doctor's office. For some children, however, the illness can cause serious problems requiring visits to the hospital emergency rooms and multiple hospitalizations. Asthma is the third-ranking cause of hospitalizations among children under the age of 15 and the first-ranking cause among chronic conditions for children.

Lead is highly toxic, and exposure to it is dangerous, especially for children aged six months to six years. Lead poisoning is preventable. Child lead poisoning is caused by the inhaling of lead dust, or the swallowing paint chips, or other lead-contaminated objects. Low levels of lead poisoning may damage the nervous system – including the brain – interfere with growth, harm hearing, lower IQ scores, or make learning difficult. Low-level lead poisoning may also affect a child's behavior, making the child more excitable or less able to concentrate. At high levels, lead poisoning may cause coma, convulsions, and death. Although child lead levels have decreased dramatically in recent decades, largely due to the removal of lead in food cans and gasoline, lead contamination continues to pose a threat to child health. It is now usually acquired by exposure to lead-based paint. Residential paint containing lead was banned in 1978, but paint applied to pre-1950 housing may contain up to 50% lead content. Minority and poor children are disproportionately exposed to sources of lead poisoning. Children aged 1–5 with elevated blood lead levels were more likely to be found among those who are poor, non-Hispanic African Americans living in the inner city or living in older housing.[2] Lead poisoning is preventable, and screening children for lead poisoning provides an early diagnosis to potential problems. Testing is recommended between six months to three years of age.

Adolescent Mental Health

Suicide of adolescents has increased dramatically. Today's youth are often considered to be in a state of crisis. By the time children become teenagers, nearly 20% have already experienced depression at some time in their lives. Approximately half of all adolescents are at moderate to high risk of engaging in one or more self-destructive behaviors, including unsafe sex; teenage pregnancy and child-bearing, drug and alcohol abuse, under achievement, failure, or dropping out of school, and delinquent or criminal behavior. Many of these problem behaviors are interrelated. Some of them are related to a multitude of outside influences including physical abuse, social violence in the streets and at home, and a media that portrays promiscuous sex, drug abuse, and violence as normal behaviors.

Three fundamental human needs are crucial to survival and healthy development. First is the need to be a valued member of a group that provides mutual support and caring relationships. Second is the need to become a socially competent individual who has the skills to cope successfully with life. Third is the need to believe in a promising future with real opportunities. Suicide and other self-destructive behaviors often occur when adolescents feel that filling their needs is an unattainable goal. Scientific research has shown that recognition and appropriate treatment

of mental and substance-abuse disorders is the most promising way to prevent suicide and suicidal behavior in all age groups.

Child Care

The population of Lincoln–Lancaster County includes 38,383 children aged 0–12 years.[3] Sixty-four percent of the women of in the workforce have children under the age of six. Access to quality, affordable child care is a critical issue. Quality care can be defined as that which is licensed, safe, protects the physical and emotional health of children, and meets their developmental needs. Research indicates that quality child-care settings do not negatively affect the emotional and mental health of children and in fact can be a positive developmental influence with the outcome of healthy, happy children.[1] Good child care in which parents have trust and are involved is an extension of the family and contributes to good parenting outcomes. The supervision of late elementary and early adolescent children is also an important issue. Children in self care are exposed to many potential negative effects. These include alcohol, tobacco and other drug use, physical and sexual abuse from other children or adults, and an increased risk of injury.

The need for infant care in Lincoln–Lancaster County is clearly growing.[4] In 1998 there were 3,388 births in the county. The Lincoln–Lancaster County Health Department Child Care Connection, a resource and referral service, received an average of 250 calls a month in 1998 from parents needing care for 266–502 children.[5] Approximately half of these calls were request referrals for infant care. Parents needing care for their infants face three major challenges: availability of infant care, quality of care, and availability of part-time and nonregular hours care.[6] Family income is strongly associated with the degree of difficulty parents have in finding care, with those having lower incomes reporting the greatest difficulty. Current costs for infant care, including both homes and centers, range from $50–150 per week. The first two years of a child's life are critical to the outcome of his or her life. Infants in care can be at a greater risk of abuse, neglect, developmental deprivation, and physical abuse. They require a consistent provider; a safe, healthy, and nurturing environment; good nutrition; and appropriate developmental care.

Frequent mild illness, an average of five to ten per year, is a normal condition of childhood, and the activity level of ill children is age dependent.[1] Children in child care bear an increased burden of infectious disease due to an increased exposure to other children. Infants and toddlers are at particular risk because of limited immune defenses. Most illnesses are common respiratory or gastrointestinal infections, which are not severe and are caused by respiratory and intestinal viruses.

Working parents should be entitled to family sick leave for their ill children. There is a general agreement among health professionals and the public that when a child is seriously ill or when it is not yet clear that the illness is a mild one, the parent should have the right to be at home with the child. When a child is recuperating or has a cold or other mild illness, parents often need alternative arrangements. At a minimum, working parents should be able to use their own sick or personal days to care for their children. However, children are ill frequently, and some parents need help with making alternative arrangements for days when a child is not very ill and the parents need to be at work.[5]

School Health

Schools have more influence on the lives of young people than any other social institution except the family, providing a setting where friendship networks develop, socialization occurs, and norms

that govern behavior are developed and enforced. Healthy children learn better than sick children. The goals of schools are consistent with goals of health promotion. Health promotion is a central facet of the educational goal of schools, which is to prepare youth to lead productive lives. The School Health Education (SHEE) study demonstrated that school health education is an effective means of helping children improve their health knowledge and develop healthy attitudes.[7] School health education can decrease the likelihood that children will adopt behaviors that are hazardous to health, such as smoking. Mandatory health curriculum can and will help our children develop positive health habits resulting in a major impact on the future health of the United States. The cost of poor health habits, such as poor nutrition and inactivity, resulting in obesity and related diseases, is more than $100 billion per year to the nation.

Children with disabilities are those children with limitations in activity because of an impairment or health condition which adversely effects development or educational performance. Various aspects of health and well-being, including access to health care, health promotion, prevention of secondary conditions, and removal of environmental barriers, must be addressed to provide full participation in society by children with disabilities. Inclusion in educational and community activities with nondisabled peers is a crucial part of the social and emotional health of children with disabilities.

Current Status and Trends

Children's Environmental Health

There are 4.8 million American children under the age of 18 with asthma.[8] The number of children with asthma has increased 75% from 1980 to 1994. Prevalence of asthma in preschool children increased 160% from 1980 to 1994, and 5.8% of children under age five were reported to have asthma in 1995.[9] The annual cost of treating asthma in children under age 18 was $712 million in 1995.[9] Of this cost, $295 million was spent on emergency room visits. Asthma is the leading cause of school absenteeism and accounts for 10 million lost school days each year. Children with asthma average twice as many absences from school than children without asthma.[10] The loss in productivity by working parents caring for children who miss school due to asthma is an estimated $1 billion a year.[10] A 1998 Boston-based study of children with asthma who received intensive asthma education, intervention, and follow-up nursing visits experienced a 73% reduction in emergency room visits, 84% reduction in hospitalization rates, and an 82% reduction in outside-plan costs (ambulance, tertiary referrals, and home health care).[9] Annual costs for this group of children with asthma dropped from $78,000 before intervention to $13,700 the year following the intervention. Asthma disproportionately affects minorities and the poor. Although asthma prevalence for nonwhites is only slightly higher than for whites, the asthma hospitalization and morbidity rates for nonwhites are more than twice those for whites.[10] Not clearly understood just why, multiple factors are likely the causes, such as higher levels of exposure to environmental tobacco smoke, pollutants and environmental allergens; lack of access to quality medical care; and lack of financial resources and social support to manage the disease effectively over time.

Although significant progress has been made in reducing elevated blood

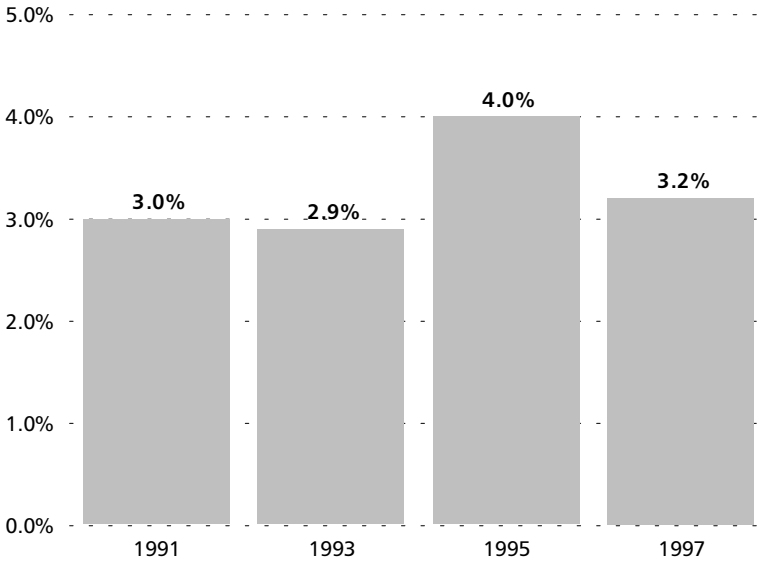

Figure 1: Suicide injury among Lancaster County High School students. Percentage of students who reported attempting suicide during the past 12 months, and as a result, were injured and required treatment by a doctor or nurse.[1]

lead levels (EBLLs) in children, lead poisoning remains a major preventable environmental health problem for children in Lincoln–Lancaster County.[11] Between July 1996 and June 1999, 4,447 children, aged six months to six years, were screened for blood lead levels (BLLs) by the Lincoln–Lancaster County Childhood Lead Poisoning Prevention Program (CLPPP). BLL's among children tested indicate that one in ten (9.9%) of children in high-risk communities have EBLLs of 10 μg/dL or higher.[12] These children are usually living in pre-1950, deteriorating housing and are below poverty-level income. Many of these homes are rental properties. A survey of local physicians revealed that only one in ten physicians always assess potential environmental risks of their child patients.[13] Thirty-five percent indicated they rarely or never discuss environmental risk factors with a child's parents or guardians.

Adolescent Mental Health

Suicide is the ninth leading cause of death in the United States. The risk factors for suicide frequently occur in combination. Scientific research has shown that almost all people who take their own lives have a treatable mental or substance-abuse disorder. The majority have more than one disorder. Suicide remains a complex behavior that requires intensive preventive intervention.

Child Care

Although Lancaster County has more than 816 childcare facilities at present, the need for quality care, especially for infants, remains permanent. Current costs for infant care range from $50–150 per week. The rate range for toddler care is $50–110 per week, and for school-age children the range of cost is $25–110. The highest rates are attributed to center care and care that is developmental in nature rather than custodial. Parents are often faced with selecting care that does not meet their standards due to the high cost of preferable care.

A statewide commission has been set up by the governor to study the costs of child care and to make recommendations for long-term solutions. It is imperative that a sound system for the financing of child care be established to continue with the development of high quality care that keeps pace with the population growth in Lancaster County.

The Kids in Touch Environmentally (KITE) program enables the department to teach childcare providers about environmental conditions and practices that are hazardous to children, so that they can help protect the children in their care. This protection is accomplished through the enlightened actions of the childcare providers – maintaining a healthful environment, engaging in healthful environmental practices, and educating the children to do the same. As a result, the program helps prevent the exposure of children to environmental hazards; raises the overall quality of community childcare resources; raises community awareness of the impact of the environment on children's health; and increases the likelihood that the children, as future adults, will take action to avoid environmental condi-

tions and practices hazardous to children.

The Providers Exceeding Licensing Standards (PELS) is a public-private initiative that supplies family resource specialists to make home visits and assist providers in meeting standards. Providers completing the program are noted on referral lists through child care connection.

Technical assistance is available for child care center staff through either in-service training on a variety of topics or consultations upon request.

Disease prevention and management procedures and checklists have been developed to educate and assist child-care staff when an infectious outbreak, such as shigellosis, occurs. An environmental health specialist does on-site follow-up when a communicable disease has been pinpointed to a facility. A review of sanitation procedures, including correct handwashing, is completed.

School Health

Schools with comprehensive health education did not meet Healthy People 2000 goals. Comprehensive school health education includes eight areas of content: Personal Health and Physical Fitness, Mental and Emotional Health, Prevention and Control of Disease, Nutrition and Weight Control, Death and Dying (optional), Injury Prevention and Safety, Community and Environmental Health, and Consumer Health and Family Education. Baseline data gathering revealed that only 11% of middle schools and high schools met just five of the essential criteria for comprehensive school health education. Only 2.3% of schools met all eight criteria.[14] Only 20% of the county's middle schools and high schools require one school year of health education. Efforts of health educators to promote healthy lifestyles in adults are hampered by habitual behaviors of the adult, often learned early in life. The importance of prevention education at early ages cannot be overemphasized. Success is based on curricula, administrative support, and adequately prepared and motivated teachers. Nebraska law does not mandate comprehensive health education. The Lincoln–Lancaster County Health Department continues to provide information about middle school and high school student attitudes toward healthy lifestyle behaviors to community decision-makers through biyearly youth risk behavior surveys. This survey compares the attitudes of students in Lincoln–Lancaster County with national data.

In addition to comprehensive health education for all students, students with disabilities eligible for special education have unique needs. Within the Lincoln Public Schools, enrollment in special education services has increased 64% from 1989 to 1999, while student growth was only 19.7%.[16] The percentage of boys and girls receiving special education services from Lincoln Public Schools has remained virtually unchanged from 1990 to 1999. In 1990, 31.3% of the special education students were female, while in 1999 this percentage was 31.8%. During the same years, the percentages of males were 68.7% and 68.2%.[3] Contrary to public perception, the cost of educating special education students at Lincoln Public Schools has not increased dramatically over the past six years. For the 1992–93 school year, the average cost of educating a student eligible for special education was $10,907 compared to $11,255 for the 1997–98 school year.[17] Similar data needs to be gathered for the other Lancaster County Schools.

Health Disparities

Disparities in levels of family income, education-related differences in knowledge, and time to pursue healthy behaviors are apparent in measurable health factors, such as smoking, overweight, elevated blood lead levels, sedentary lifestyles, personal health perceptions (risky behaviors), diabetes mortality, activity limitations, and access to health care (health insurance coverage and medical/dental visits). Disparity by race and ethnicity is also evident between the general population and at least one select population.

The rate of asthma hospitalizations in 1995 showed increases over the baselines of 188 per 100,000 for two special population groups – Blacks and non-whites – and all children aged 14 and younger.[15]

The prevalence of serious mental retardation (IQ less than 50) among school-aged children was 4 per 1000, an increase over the 1985–85 baseline of 3.1.[15]

The proportion of children aged six and younger who are regularly exposed to tobacco smoke at home was 27% in 1994.

Baseline data (1994) for comprehensive school health education showed that only 11% of middle schools and high schools met just five essential criteria of comprehensive school health education, and only 2.3% met all eight criteria.

Non-Hispanic, African-American and poor children, aged six months to six years, continue to be disproportionately exposed to sources of lead poisoning and are found to have elevated blood lead levels due to living conditions in old rental properties or poor-lifestyle environments.

Recommendations

Many health problems relate to more than one behavioral risk factor. The most effective community health promotion programs are those that implement comprehensive intervention plans. These plans address factors that negatively influence participation in work, school, leisure, family, and community life.

- Provide risk-behavior prevention programs that cover a wide range of issues that adolescents face. Determine youth assets and expand on them: communication, relationship building, conflict management, and assertiveness and negotiation skills.
- Encourage meaningful, increased communication between parent and child that provides mutual support and caring relationships.

Children's Environmental Health

- Develop effective case management programs for children with asthma, including school commitment that provides students prompt and convenient access to their medications.
- Develop community asthma awareness through regular reports regarding the economic impact on the community, including the loss of productivity by working parents caring for sick children.
- Provide intervention that assures access to medical care, appropriate financial support for asthma medication and monitoring aids, and smoke-free environments for children.
- Apply research findings from studies of co-morbidity of asthma to other child and youth risk factors of tobacco, allergens, and exercise.

- Seek and screen high risk children aged six months to six years for lead poisoning, placing emphasis on early screening at six months to three years of age.
- Develop and implement a comprehensive plan for lead-safe housing for the poor and minorities through collaborations with the private and public housing sectors.
- Encourage primary-care providers to complete and maintain environmental health assessments of child patients.

Adolescent Mental Health

- Promote early access to mental health diagnostic services for children.
- Develop broad-based school and community prevention programs designed to address suicide and suicidal behavior as part of a broader focus on mental health, stress coping skills, substance abuse, and aggressive behaviors.
- Seek to enhance communication between mental-health professionals and primary-care providers so that concepts of mental health are integrated in the overall health assessment of children and youth.
- Promote anti-stigma campaigns for mental-health services, stressing the value and successes of early intervention (as in Head Start and immunization programs).

Child Care

- Encourage development of high quality, affordable infant care options, including those that focus on ethnic preference.
- For mildly ill children, develop sick-child care facilities that focus on a child's needs and allow parents to return to work.
- Provide infant care providers with consistent education and support based on recent brain development research.
- Promote family-friendly options in the workplace that attract and retain good workers and boost productivity, including on-site child care, resource and referral services, and flexible work programs.
- Promote quality child care for children with disabilities.

School Health

- Initiate comprehensive health education curricula for all children in public, parochial, and rural schools of Lancaster County.
- Reinstate a mandatory school health curriculum in all Nebraska schools.
- Encourage continued collaborations with schools to assure comprehensive health education is provided with intensity, duration, and saturation.
- Use programs such as "Tools for Schools" to improve indoor air quality of both schools and childcare facilities.
- Expand utilization of the Mobile Health Clinic to provide comprehensive health services to all children of Lancaster County.
- Promote early identification of children with disabilities to parents, medical staff and physicians, child-care providers, and other health and human service professionals.
- Increase parental and professional knowledge of services for disabilities.

Notes

Related discussion or indicators are located in the chapters on *Maternal and Child Health*, *Oral Health*, *Access to Health Care*, *Toxic and Hazardous Materials*, *Animal Control*, *Tobacco Use*, *Nutrition and Physical Activity*, *Alcohol and Other Drugs*, *Sexual Behavior*, and *Immunization and Communicable Disease*.

Table 1

-- Currently no data source.
1. U.S. Census, 1995 data from small area poverty estimates.
2. U.S. Census, 1998 data from U.S. poverty estimates.
3. Currently no data source. Data is potentially obtainable from local hospitals.
4. U.S. Department of Health and Human Services, Office of Public Health and Science, *Healthy People 2010 Objectives: Draft for Public Comment*, September 1998. 1993–94 data from the National Hospital Ambulatory Medical Care Survey. Rate for children 0–4 is 121 per 100,000 and for children 5–14 is 81 per 100,000.
5. U.S. Department of Health and Human Services, Office of Public Health and Science, *Healthy People 2010 Objectives: Draft for Public Comment*, September 1998. 2010 national objective is 46 per 100,000 (total population), given a 1992–1994 baseline of 76 per 10,000. Currently no age specific targets are set.
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13. Lincoln–Lancaster County Health Department, Child Care Program, 1999 data from child care inspections (required annually).
14. Currently no data source. Data could be obtained through the use of a community survey tool.
15. Currently no data source. Data collection method needs to be established.

Figure 1

1. Lincoln–Lancaster County Health Department, "Youth thoughts on Suicide" Youth Risk Behavior Survey fact sheet, 1999.

Narrative sources

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